

NOTES ON THE GENUS *CONCHIOPSIS*, COPE.

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In the Proceedings of the Academy of Natural Sciences (1873, Part II. page 340), I find descriptions by Prof. Cope of some fossil fishes from the Coal Measures of Ohio, which seem to require a word of comment. A large collection of amphibian remains which I obtained from Ohio, I sent to Prof. Cope for description, informing him that the fossil fishes found with them had been, or would be, described by myself. Among the amphibian remains sent to Prof. Cope a few fishes were accidentally included. These he has described in the place referred to. To receive them he has constructed the new genus *Conchiopsis*, Cope, and describes under it three species; *C. filiferus*, Cope; *C. anguliferus*, Cope, and *C. exanthematicus*, Cope. He also describes another genus, *Peplorhina*, of which he defines one species (*P. anthracina*, Cope). Since these descriptions were published, the specimens have been returned to me. On examining them, I find—

1st. That Prof. Cope's genus *Conchiopsis* is identical with Agassiz's *Cœlacanthus*, described in his *Poissons Fossiles*, Tom. II., Par. 2, page 170. The genus is still further and more fully illustrated by Huxley in *The Memoirs of the Geological Survey of the United Kingdom, Decades X and XII*.

2d. Prof. Cope's species *C. filiferus* and *C. anguliferus*, both belong to the species *Cœlacanthus elegans*, described by me in the *Proceedings of the Acad. of Nat. Sciences*, Philadelphia, April, 1856, and more fully illustrated in the first volume of the final report of the *Geological Survey of Ohio*, Part II., Palæontology, page 337, pl. 40.

3d. The "gular plates" referred to by Prof. Cope in his description of *Conchiopsis*, are really the *opercula*; the jugular plates—which he has apparently not seen—are long—elliptical, sometimes almost linear in outline.

4th. The dentition which Prof. Cope attributes to *Cœlacanthus* (*Conchiopsis*, Cope) is not the true dentition of the genus, as he has drawn his inference from the dentition of his *C. exanthematicus*, which is not a *Cœlacanthus*.

5th. The species referred to above, *Conchiopsis exanthematicus*,

Cope, is identical with his *Peplorhina anthracina*. The chief distinction made by him: the difference in the surfaces of what he calls the "gular shields"—in one case smooth, in the other granulated or pustular—is due simply to the exposure, in one case, of the inside, and the other, the external and ornamented surface of the check plates as they are, and not jugulars as he considers them.

6th. The material representing Prof. Cope's genus *Peplorhina* is too imperfect for satisfactory study, but, in my judgment, it represents an amphibian and not a fish.

I ought, perhaps, to say in justification of the somewhat positive manner in which the above statements are made, that they are based upon a careful study of an immense amount of material which I have been gathering from Linton during the last twenty years. The richness of this material may be inferred when I say that of the species especially referred to in the above note, *Celacanthus elegans*, I have obtained more than 500 specimens.